SAMPLING AND ANALYSIS QUALITY ASSURANCE PROJECT PLAN
SITE ASSESSMENT ACTIVITIES PART II
RARITAN BAY SLAG SITE
OLD BRIDGE AND SAYREVILLE, NEW JERSEY

Prepared for:

U.S. Environmental Protection Agency
Region 2
Edison, New Jersey 08837

Prepared by:

Weston Solutions, Inc.
Edison, New Jersey 08837

EPA Contract No. EP-W-06-072

April 2009

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RARITAN BAY SLAG SITE
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DON: RST 2 – 02 – F – 0922

April 2009

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1.0 INTRODUCTION

Presented herein is the Sampling and Analysis Quality Assurance Project Plan (SAQAPP) for the site assessment field activities to be conducted as part of the Raritan Bay Slag Site investigation by Weston Solutions, Inc. (WESTON®). The site-specific SAQAPP has been developed at the request of the United States Environmental Protection Agency (EPA) in accordance with the EPA Region 2 CERCLA Quality Assurance Manual (October 1989) and the WESTON Quality Assurance Project Plan (QAPP) (December 2005).

The sampling strategy presented in this plan emphasizes the collection of samples required to evaluate certain exposure pathways of interest to the CERCLA Program. The sampling plan includes the following sections: Site Reconnaissance (2.0), Sampling Event and Sampling Procedures (3.0), Quality Assurance/Quality Control (4.0), and Field Changes and Corrective Actions (5.0). Additional quality assurance specifications can be found in the WESTON QAPP (December 2005), which is included by reference.

1.1 Site Description

The Raritan Bay Slag Site (RBS) (CERCLIS ID No. NJN000206276) is approximately 1.3 miles in length and consists of the Laurence Harbor seawall in Old Bridge Waterfront Park and portions of the area in and around the Cheesequake Creek inlet, both located on Raritan Bay. During the replacement of a sewer line, fill and battery casings were observed in the Margaret's Creek area, which is located east of the Laurence Harbor seawall. The Margaret's Creek area was proposed for acquisition by the State of New Jersey under the Green Acres Program in 2006. During a preliminary assessment phase of the Green Acres review process, historical aerial photos revealed the filling of approximately 20 acres of that area by 1974. Further investigation by the New Jersey Department of Environmental Protection (NJDEP) found slag deposits along the seawall at the Old Bridge Waterfront Park. The NJDEP referred the seawall and the area around the Cheesequake Creek inlet to EPA for a removal action, while maintaining control of the Margaret's Creek Site.

In September 1972, the NJDEP was advised by a local environmental commission member that lead-bearing waste material was being disposed of along the Laurence Harbor beachfront on Raritan Bay. Also by letter to NJDEP dated December 7, 1972, NL Industries, Inc. (NL) acknowledged that "slag which consists of non-recoverable low yield metallic waste from blast fumace and blast fiimace rubble are disposed of by Liberty Tmcking Company at their property in Madison Township, Route 35, New Jersey." The Liberty Tmcking Company property was located in the Margaret's Creek area. Madison Township is now known as Old Bridge Township. NL used battery plates from lead/acid storage batteries as the principal feed material for the blast fiimace at its plant in Perth Amboy.

1.2 Previous Work at the Site

On December 13, 2006, the NJDEP conducted a limited site investigation at the Margaret's Creek Site to visually characterize fill material via excavation of test pits. Waste materials were evident in numerous locations across the surface of the site, including large quantities of what appeared to be shredded automotive battery casings and refractory brick and slag. On March 14, 2007, the NJDEP

collected soil samples at the Margaret's Creek Site. Lead was detected at concentrations ranging from 701 to 146,000 parts per million (ppm).

On May 23, 2007, NJDEP conducted further soil sampling at the Margaret's Creek Site and the Laurence Harbor seawall. Antimony was detected at concentrations above state criteria, ranging from 17.8 ppm to 12,900 ppm. Arsenic was detected at concentrations ranging from 23.6 ppm to 3,350 ppm. Copper was detected at concentrations ranging from 4.2 ppm to 3,590 ppm. Lead was detected at concentrations ranging from 647 ppm to 142,000 ppm.

On July 24, 2007, NJDEP conducted another round of soil sampling in a preliminary attempt to identify the boundary of contaminated soils in public areas. Thirty-one locations were sampled from the 0-6 inch depth interval in the park area including an expanse of beach east of the footbridge over Margaret's Creek. Analysis of samples collected from the RBS Site indicated antimony at concentrations ranging from 0.42 ppm to 20.2 ppm. Arsenic was detected at concentrations ranging from 1.3 ppm to 24.5 ppm. Copper was detected at concentrations ranging from 3.5 ppm to 44 ppm. Lead was detected at concentrations ranging from 3.1 ppm to 545 ppm.

From September 10 through 16, 2008, WESTON personnel collected a total of 48 aqueous samples (including two environmental duplicate samples), 95 surface soil samples (including five environmental duplicate samples), 10 subsurface soil samples, and 84 sediment samples (including four environmental duplicate samples) from the Site.

Analysis of soil samples indicated concentrations of lead ranging from 1.6 R (rejected) ppm to 198,000 ppm. Analysis of sediment samples indicated concentrations of lead ranging from 0.86 J (estimated) to 89,200 R ppm. Analysis of surface water samples indicated concentrations of lead ranging from non-detect to 1,810 ppm.

1.3 Schedule

The tentative schedule for the RBS Site is:

Activity	Proposed Start Date	End Date
Soil, Sediment, and Surface Water Sampling	April 20, 2009	April 24, 2009
Analysis & Data Validation	May 4, 2009	May 8, 2009
Data Receipt	May 11, 2009	May 15, 2009
Draft Report	May 18, 2009	May 18, 2009

The following personnel are tentatively scheduled to work on this project:

Personnel	Responsibility
Dan Gaughan	Project Manager, Site Health and Safety Officer, Sampler
Scott Snyder	Sample Management Ofticer (SMO)
Kelli Lucarino	Sampler, Global Positioning System (GPS) data collection
Julissa Morales	Sampler, GPS data collection
Jeff Lynes	Sampler, GPS data collection (altemate)
Laura Holloway	Sampler, GPS data collection
Eric Hazard	Sampler, GPS data collection

2.0 SITE RECONNAISSANCE

On August 21, 2008, representatives of WESTON and EPA conducted an on-site reconnaissance of the RBS Site. Observations indicate that slag, concrete, and asphalt are present as a till material at the Laurence Harbor seawall and the westem jetty at the Cheesequake Creek inlet, including the waterfront area west of the jetty. The slag is in direct contact with sand and surface water along the length of the seawall and the westem jetty at the Cheesequake Creek inlet. The amount of slag at the site could not be determined. During the reconnaissance, people were observed utilizing the beach areas and jetties for sunbathing, swimming, and tishing.

On April 14, 2009, representatives of WESTON and EPA conducted an on-site reconnaissance of the RBS Site to discuss the newly proposed sample locations. WESTON will collect further samples from the beach between the Cheesequake Creek Inlet and the third jetty, between the third jetty and the second jetty, between the second jetty and the tirst jetty, and east of Margaret's Creek to the Middlesex County pumping station.

3.0 SAMPLING EVENT AND SAMPLING PROCEDURES

This section outlines overall sample management and control procedures to be implemented by WESTON personnel during field activities. Standard analytical methods, preservation, holding times, and sample containers are summarized in Table 1.

3.1 Sample Tracking System

3.1.1 Sample Identification System

Each sample collected by WESTON will be designated by a site-specific project code. The code for the Raritan Bay Slag Removal Site is RBS. The media type will follow the code. A hyphen will separate the site code and media type. Samples will be collected from Old Bridge Waterfront Park.

Specific media types are as follows:

S – Soil	SED - Sediment
SW – Surface Water	RIN – Rinsate

After the media type, sequential sample numbers will be listed; sample numbers will be identified in the field. Surface water samples will be analyzed for both TAL metals and dissolved metals. Samples designated for dissolved metals analysis will have a 'D' designation after the sample number. A duplicate sample will be idenfified in the same manner as other samples and will be distinguished and documented in the field logbook.

3.1.2 Sample Bottles

Sample bottles will be obtained from qualified vendors and will meet all guidelines specified in OSWER Directive 9240.0-05A, Specifications and Guidance for Obtaining Contaminant-Free Sample Containers (December 1992).

3.1.3 Sample Packaging and Shipping

Samples will be packaged and shipped according to the EPA Contract Laboratory Program (CLP) Guidance for Field Samplers (July 2007). Chain of custody forms, sample labels, custody seals, and other sample documents will be completed as specified in the CLP Guidance. All entries will be made in permanent ink. If errors are made when completing any of these forms, the error will be crossed out with a single line, initialed, and dated by the sampler. Each environmental sample will be properly idenfified and sealed in a polyethylene bag. The bag shall then be placed in a plastic cooler which has also been lined with a large polyethylene bag. Samples will be packed with sufficient ice (sealed in polyethylene bags) to cool the samples to 4°C. Sufficient non-combustible, adsorbent cushioning material shall be placed in the cooler so as to minimize the possibility of container breakage. The large plastic bag shall then be sealed and the container closed. Custody seals and strapping tape shall then be affixed to the outer packaging. All samples will be shipped via common carrier to the laboratory within 24 hours of collection. Sample shipment will conform to

Weston's Manual of Procedures for Shipping & Transporting Dangerous Goods, Section 1, subsections 1.0, 2.0, and 2.1 (Appendix A) and the most current International Air Transport Association (IATA) Dangerous Goods Regulations. Information relating to the shipment of samples, including the airbill number, sample quantity, and sample types, will be reported to the EPA Sample Management Office on the day of or morning after shipment.

3.1.4 Sample Documentation

The sampling team or individual performing the sampling activity will maintain a field logbook. The bound, numbered, and paginated logbook shall be filled out at the location of sample collection immediately after sampling. The logbook shall contain sampling information, including: sample number, sample collection time, sample location, sample descriptions, sampling methods, weather conditions, field measurements, name of sampler, site-specific observations, and any deviations from protocol. All entries will be entered legibly in permanent ink. If errors are made when completing this logbook, the error will be crossed out with a single line, initialed, and dated by the sampling team. WESTON will use GPS to record sample and other site feature locations electronically, and will include a description of the GPS data collection and site identifiers in the field logbook.

3.2 Sampling Program

WESTON will collect soil, sediment, and surface water samples from throughout the site and at an appropriate background location. A total of 104 soil samples, 116 sediment samples, and 16 surface water samples (including six soil, six sediment, and two surface water environmental duplicate samples) will be collected from locations throughout the site. All samples will be collected to document contamination at the site.

Samples will be collected as follows:

Soil/Sand

Beach

Area between the third jetty and the eastern jetty at the Cheesequake Creek Inlet

Continue eastward with the two transects from the previous sampling event (parallel to the shoreline). Collect samples at 100-foot intervals. The depth of the samples will be 0 to 2 inches. The analysis will include TAL Metals for all samples. A total of eight samples will be collected in this area.

Area between the second jetty and the third jetty

Set up two full transects (and possibly two partial transects) parallel to the shoreline across the entire beach. The first transect will be set near the water and each subsequent transect will be set at 50-foot intervals inland. Collect samples along transects at 100-foot intervals. The depth of the samples will be 0 to 2 inches. The analysis will include TAL Metals for all samples. A total of 38 samples will be collected in this area.

Area between the first jetty and the second jetty

Set up two transects parallel to the shoreline across the entire beach. The first transect will be near the water and the second will be 50 feet inland. Collect samples along transects at 100-foot intervals. The depth of the samples will be 0 to 2 inches. The analysis will include TAL Metals for all samples. A total of 14 samples will be collected in this area.

Area east of Margaret's Creek between the creek and the Middlesex County pumping station

Set up two transects parallel to the shoreline across the entire beach. The first transect will be near the water and the second will be 50 feet inland. Collect samples along transects at 100-foot intervals. The depth of the samples will be 0 to 2 inches. The analysis will include TAL Metals for all samples. A total of 38 samples will be collected from this area.

Sediment

Raritan Bay

Area between the third jetty and the eastem jetty at the Cheesequake Creek Inlet

Continue eastward with the two transects from the previous sampling event (parallel to the shoreline) using the same intervals. Collect samples at 100-foot intervals along each transect. The depth of the samples will be 0 to 3 inches. The analysis will include TAL Metals for all samples. A total of 28 samples will be collected from this area.

Area between the second jetty and the third jetty

Set up two transects parallel to the shoreline and following the contour across the entire beach. Use the same interval spacing as the other sediment samples collected off of the beaches. Collect samples at 100-foot intervals along each transect. The depth of the samples will be 0 to 3 inches. The analysis will include TAL Metals for all samples. A total of 22 samples will be collected from this area.

Area between the first jetty and the second jetty

Set up two transects parallel to the shoreline and following the contour across the entire beach. Use the same interval spacing as the other sediment samples collected off of the beaches. Collect samples at 100-foot intervals along each transect. The depth of the samples will be 0 to 3 inches. The analysis will include TAL Metals for all samples. A total of 14 samples will be collected from this area.

Area east of Margaret's Creek between the creek and the Middlesex County pumping station

Set up two transects parallel to the shoreline and following the contour across the entire beach. Use the same interval spacing as the other sediment samples collected off of the beaches. Collect samples at 100-

foot intervals along each transect. The depth of the samples will be 0 to 3 inches. The analysis will include TAL Metals for all samples. A total of 38 samples will be collected from this area.

Background locations

Collect six samples (same locations as previous). The depth of these samples will be 0 to 3 inches. The analysis will include TAL Metals for all samples. A total of six samples will be collected from this area.

Surface Water

Raritan Bay

Area between the third jetty and the eastem jetty at the Cheesequake Creek Inlet

Continuing eastward from the previously sampled locations, collect three activity-based samples (locations and tidal conditions to be determined in the field). Also, collect one "non activity-based water sample from one of these locations. The analysis will include TAL Metals (both total and dissolved), for all samples. A total of eight samples will be collected from this area.

Area between the second jetty and the third jetty

Collect three activity-based samples (locations and tidal conditions to be determined in the field). Also, collect one "non activity-based water sample from one of these locations. The analysis will include TAL Metals (both total and dissolved), for all samples. A total of eight samples will be collected from this area.

Area between the tirst jetty and the second jetty

Collect two activity-based samples (locations and tidal conditions to be determined in the field). Also, collect one "non activity-based water sample from one of these locations. The analysis will include TAL Metals (both total and dissolved), for all samples. A total of six samples will be collected from this area.

Area east of Margaret's Creek between the creek and the Middlesex County pumping station

Collect four activity-based samples (locations and tidal conditions to be determined in the field). Also, collect one "non activity-based water sample from one of these locations. The analysis will include TAL Metals (both total and dissolved), for all samples. A total of ten samples will be collected from this area.

Samples to be collected for quality assurance/quality control (QA/QC) purposes in conjunction with the soil, sediment, and surface water samples include six soil, six sediment, and two surface water environmental duplicate samples. One of every twenty tield samples for each matrix will be designated as a Matrix Spike/Matrix Spike Duplicate (MS/MSD). Rinsate blank samples will be

collected to demonstrate that the dedicated, disposable plastic scoops and trays are free of contamination. Soil, sediment, and surface water sampling locations will be recorded using GPS technology in accordance with EPA Region 2 Standard Operating Procedures. Site-specific sample analyses, bottle types, and preservatives are presented in Table 1. A description of proposed site-specific samples, including the rationale for the collection of each sample, is presented in Table 2. Table 3 contains a list of the number of bottles for each sample, analyses to be performed, preservation methods, and descriptions. Additional samples may he collected if deemed necessary while in the field. Samples will be designated for analysis of Target Analyte List (TAL) Metals and Dissolved Metals via implementation of the Field and Analytical Services Teaming Advisory Committee (FASTAC) analytical services strategy, in accordance with *SOP No. HW-32: Standard Operating Procedure for Implementing the National Strategy for Procuring Analytical Services for All OSWER Programs, Revision 5* (EPA Region 2, March 2005). The Region 2 FASTAC strategy requires coordination of all analytical services through the Regional Sample Control Coordinator (RSCC).

The following laboratories will provide the following analyses:

Lab Name/Location	Sample Type	Parameters
Inorganic CLP Lab - TBD[1]	Soil and Sediment	TAL Metals (7-day turnaround to EPA)
Inorganic CLP Lab - TBD[1]	Aqueous	TAL Metals and Dissolved Metals (7-day turnaround to EPA)

1) TBD - To be determined

Listed below are standard operating procedures which will be adhered to during field sampling activities conducted by WESTON.

3.2.1 Soil Sampling

The following procedures apply to the collection of surface soil (depth: 0 to 2 inches) using a dedicated plastic scoop:

1. Wear protective gear as specified in the Health and Safety Plan. Samplers shall don new outer sampling gloves prior to sampling at each location.

2. Use a dedicated plastic scoop to scrape away surficial organic material (grass, leaves, etc.) and remove the top layer of vegetation/soil/fill material.

3. Obtain the soil and transfer it into a dedicated plastic tray using a dedicated plastic scoop.

4. Homogenize soil in the plastic tray using the plastic scoop. Homogenization shall be completed per the following procedure:

   The soil in the dedicated plastic tray will be scraped from the sides, corners and bottom of the tray, rolled to the middle of the tray, and mixed. The soil will then be quartered and moved to the four corners of the tray. Each quarter will then be mixed individually, and when completed be rolled to the center of the tray and mixed once again.

5. Transfer the homogenized soil into the required sample containers using the dedicated plastic scoop. If there is remaining soil that will not be used for laboratory analysis, discard it at the sampling location.

6. Place samples in cooler and chill with ice. Samples will be hand-delivered or shipped within 24 hours of collection to the designated laboratory(ies).

7. Fill out field logbook, custody seals, sample labels, and chain of custody forms.

WESTON does not plan to collect subsurface soil samples (depth > 2") during the second round of the RBS sampling event.

3.2.2 Sediment Sampling

The following procedures apply to the collection of sediment (depth: 0 - 3") using dedicated, disposable plastic scoops and plastic trays:

1) Wear protective gear as specified in the Health and Safety Plan. Samplers shall don new outer gloves prior to sampling at each location.

2) Obtain the sediment sample using a dedicated, disposable plastic scoop from the surface to 3 inches below the surface, allowing any excess surface water to drain from the sampling device. If sample needs to be collected from an area of standing water in which a plastic scoop is not sufficient, an auger or ponar dredge will be utilized to collect the sample.

3) Empty contents of the scoop into a dedicated plastic tray. Repeat steps 2 and 3 until enough sediment is collected to fill required containers.

4) Homogenize the sediment in the aluminum tray using the dedicated plastic scoop. Homogenization shall be completed per the following procedure:

   The sediment in the dedicated plastic tray will be scraped from the sides, comers and bottom of the tray, rolled to the middle of the tray, and mixed. The sediment will then be quartered and moved to the four comers of the tray. Each quarter will then be mixed individually and when completed be rolled to the center of the tray and mixed once again.

5) Transfer the homogenized sediment into the required sample containers.

6) If there is remaining sediment that will not be used for laboratory analysis, discard it at the sampling location.

7) Place analytical samples in cooler and chill with ice. Samples will be hand-delivered or shipped within 24 hours of collection to the designated laboratory(ies).

8) Fill out field logbook, custody seals, sample labels, and TR/COC forms.

3.2.3 Surface Water Sampling

The following procedures apply to the collection of surface water:

1) Wear protective gear as specified in the Health and Safety Plan. Samplers shall don new outer sampling gloves prior to sampling at each location.

2) The following sampling equipment and methods may be used to collect samples:

   a) direct method
   b) stainless-steel or dedicated Teflon scoop
   c) glass or stainless-steel beaker clamped to a sampling pole (if necessary)
   d) Kemmerer bottle
   e) bacon bomb sampler
   f) dip sampler

   WESTON plans to collect surface water samples directly into the required containers, without the use of sampling devices. If equipment is deemed necessary, sampling devices will be decontaminated prior to each use or will be dedicated to a single sample location.

3) Surface water samples shall be collected moving in an upstream direction if necessary to ensure that sediment is not entrained in the water column. Submerge the bottle, scoop or beaker and collect a sample.

4) The dissolved metal sample must be filtered through a 0.45 micron filter. This will be accomplished by using a peristaltic pump and dedicated tubing to avoid cross contamination. The sample will be pumped from one sample jar into another through the filter.

5) The preservation procedure shall be as follows:

   a) VOCs – Not applicable for the RBS project.
   b) Other Parameters - Fill each container and preserve immediately as required in Table 3. When adjusting the pH for sample preservation, pour a minimal portion of sample onto broad range pH paper to verify if the appropriate pH level has been obtained.

6) Place samples in cooler and chill with ice. Samples will be hand-delivered or shipped within 24 hours of collection to the designated laboratory(ies).

7) Fill out field logbook, sample labels, custody seals, and TR/COC forms.

3.3 Decontamination

As detailed in the previous sections, all stainless-steel equipment involved in field sampling activities will be decontaminated prior to and subsequent to sampling. Decontaminafion of sampling equipment will be kept to a minimum in the field and whenever possible dedicated sampling

equipment will be used. Decontamination of sampling equipment including stainless-steel augers will be conducted as follows:

1) Alconox detergent and tap water scrub to remove visual contamination,

2) Generous tap water rinse,

3) A 10% nitric acid rinse (ultra pure grade) when sampling for inorganic parameters,

4) Distilled and deionized (ASTM Type II) water rinse, and

5) Wrap or cover exposed ends of sampling equipment with aluminum foil (shiny side out) for transport and handling.

Decontamination will be carried out over a container. Acid solutions will be neutralized using baking soda. Care will be taken to generate as little decontamination fluid as possible. The material generated by decontamination will be applied directly to the ground surface at an area of slag and allowed to percolate into the ground, in accordance with the NJDEP *Field Sampling Procedures Manual* and EPA's *Guidance for Performing Site Inspections under CERCLA.*

The dedicated, disposable plastic scoops and trays that will be utilized for collection, homogenization, and transfer of soil and sediment samples do not require decontamination. After sampling and transferring extra soil/sediment back to the sampling locations, WESTON will place the used disposable equipment in garbage bags and discard it off-site as municipal waste.

4.0 QUALITY ASSURANCE/QUALITY CONTROL

This section details the Quality Assurance/Quality Control (QA/QC) requirements for field activities performed during the sampling effort.

4.1 Field Instrument Calibration and Preventive Maintenance

The sampling team is responsible for assuring that a master calibration/maintenance log will be brought into the field and maintained for each measuring device. Each log will include at a minimum, where applicable:

- name of device and/or instrument calibrated
- device/instrument serial and/or ID number
- frequency of calibration
- date of calibration
- results of calibration
- name of person performing the calibration
- identification of the calibrant (PID, FID, pH meter)

Equipment to be used each day shall be calibrated prior to the commencement of daily activities.

4.2 QA/QC Sample Collection

This section describes the QA/QC samples that will be collected by the WESTON field team as part of the sampling effort. A summary by sample number for analysis, bottle type, and preservation is presented in Table 3.

4.2.1 Trip Blanks

Trip blank samples will not be collected during the RBS sampling event.

4.2.2 Field Rinsate Blanks

A field rinsate blank will consist of DI, demonstrated analyte-free water that has been poured over decontaminated sampling equipment. The field rinsate blank analytical results will be utilized in the evaluation of potential cross contamination resulting from inadequate decontamination. The frequency of field rinsate blank collection is one blank per decontamination event per type of equipment, not to exceed more than one per day. For the purposes of sampling associated with pre-remedial field activities, field rinsate blank collection will not exceed a total of four samples. Blanks will be collected for all parameters of interest (excluding TCLP and physical parameters) and shipped with the samples collected the same day.

Field rinsate blanks will be collected in accordance with the procedure listed below:

1) Decontaminate sampling equipment using the procedure specified in Section 3.4 of this

plan.

2) Pour DI water over the sampling device and collect the rinsate in the appropriate sample containers.

3) Preserve samples as specified in Table 3 of this plan. Test pH by pouring a small portion of sample on broad range pH paper over a collection bowl. Place samples in cooler.

4) Complete sample labels, custody seals, and chain of custody forms. Record in field logbook.

4.2.3 Deionized Water Blanks

The distilled DI water utilized for the trip and field blanks will be certified as such. A copy of this certificate will be kept on site and another in the site-specific project file. The criteria to be demonstrated as analyte-free will be consistent with that specified in the EPA Region 2 CERCLA Quality Assurance Manual (October 1989), and is as follows:

Purgeable organics < 10 ppb
Semi-volatile organics < CRQL
Pesticides/PCBs < CRQL
Metals < CRDL

where the CRQL is represented by the Contract Required Quantitation Limits and the CRDL is represented by the Contract Required Detection Limits in the most recent CLP Statements of Work. For specific common laboratory contaminants such as methylene chloride, acetone, toluene, 2-butanone and phthalates, the allowable limits are three times the respective CRQLs.

4.2.4 Duplicate Samples

Duplicate samples will be sent for laboratory analysis to evaluate the ability of reproducing the sampling methods. At a minimum, a rate of one duplicate sample per 20 samples, or one duplicate sample per batch of less than 20 samples, will be obtained for each matrix. For the purpose of site assessment projects, soil and sediment matrices will be considered as the same matrix. In addition, a minimum of one MS/MSD sample per matrix will be collected per 20 samples, or one MS/MSD sample per matrix per batch of less than 20 samples.

4.2.5 Split Samples

Splitting of samples will be conducted upon request when the site owner/operator or potentially responsible party (PRP) wishes to ensure that sample results generated by WESTON are accurate. WESTON is not responsible for supplying the necessary amount of sample containers for the site owner/operator. It is not necessary to assess the site owner/operator laboratory performance or laboratory methods used, although the methods should be of equivalent performance. The site owner/operator will be informed that split samples are to be analyzed at their own expense.

4.2.6 Background Samples

In order to accurately assess any potential contamination on the site, background sediment samples will be collected. The analysis of each sample will be equal to those specified for the environmental samples. For the purposes of site assessment projects, background samples will be collected from locations not suspected to be affected by site activities; selection of the background sample locations will be based on field observation, available site information, and the professional judgement of the sampling team.

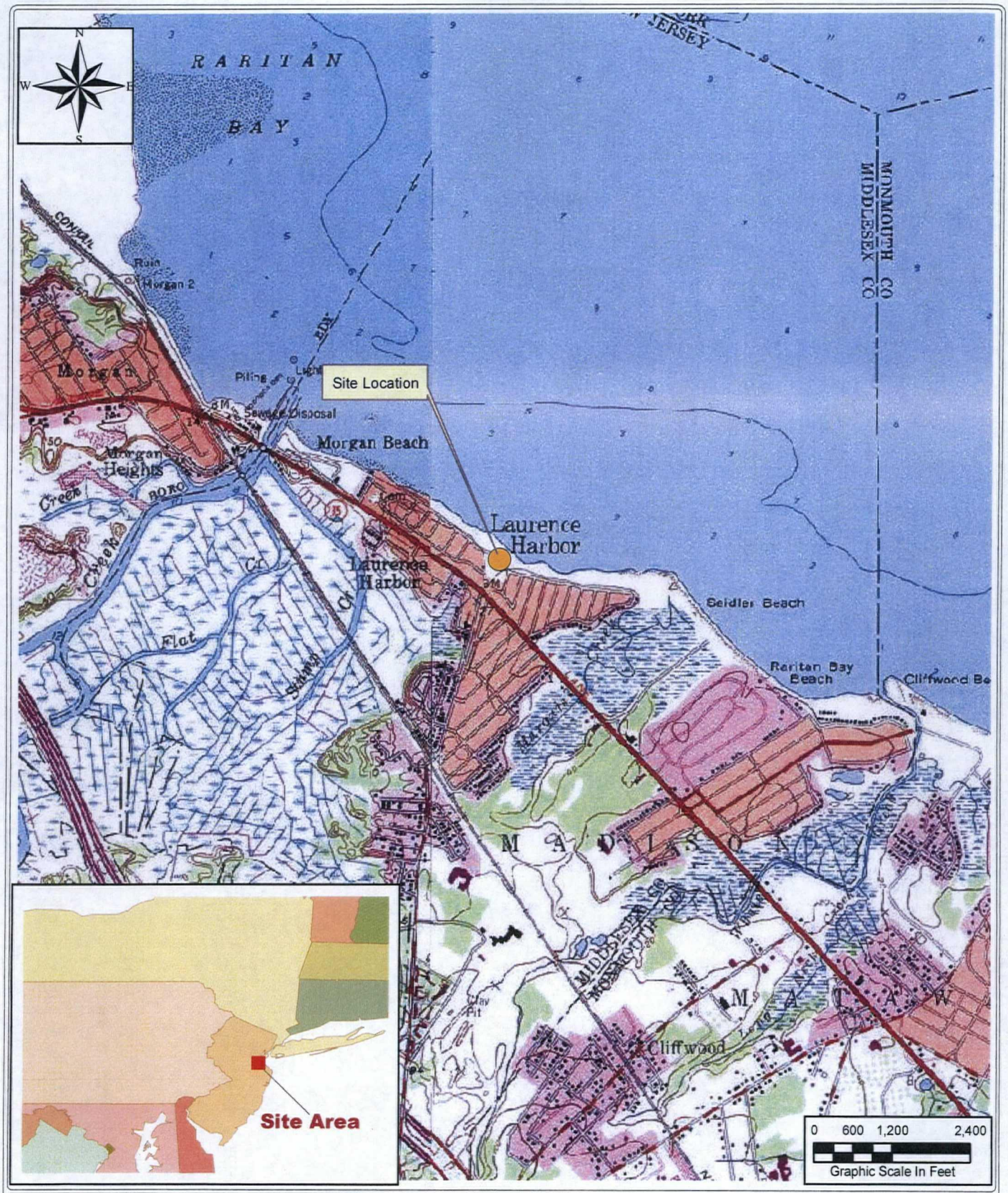
4.2.7 Data Validation

Analytical results obtained through the CLP and/or the EPA Division of Environmental Science and Assessment (DESA) will be validated in accordance with the most current EPA Region 2 data validation guidelines under a separate EPA contract.

5.0 FIELD CHANGES AND CORRECTIVE ACTIONS

The WESTON Project Manager (PM) or his/her designee may be required to modify generic site procedures to accommodate site-specific needs or unforeseeable events. In the event it becomes necessary to modify a procedure, the PM will notify the EPA Region 2 OSC. Deviations from the Field Sampling Plan will be documented in the field logbook and signed by the initiator and the PM.

FIGURES



LEGEND:

Site Location

National Geographic TOPO! U.S. Geologic Survey (USGS). 7.5 Minute Series (Topographic) Quadrangles: Keyport, NJ, 1977 and South Amboy, NJ, 1995.

TITLE:

Site Location Map
Raritan Bay Slag
Laurence Harbor, NJ

PROJECT: Raritan Bay Slag

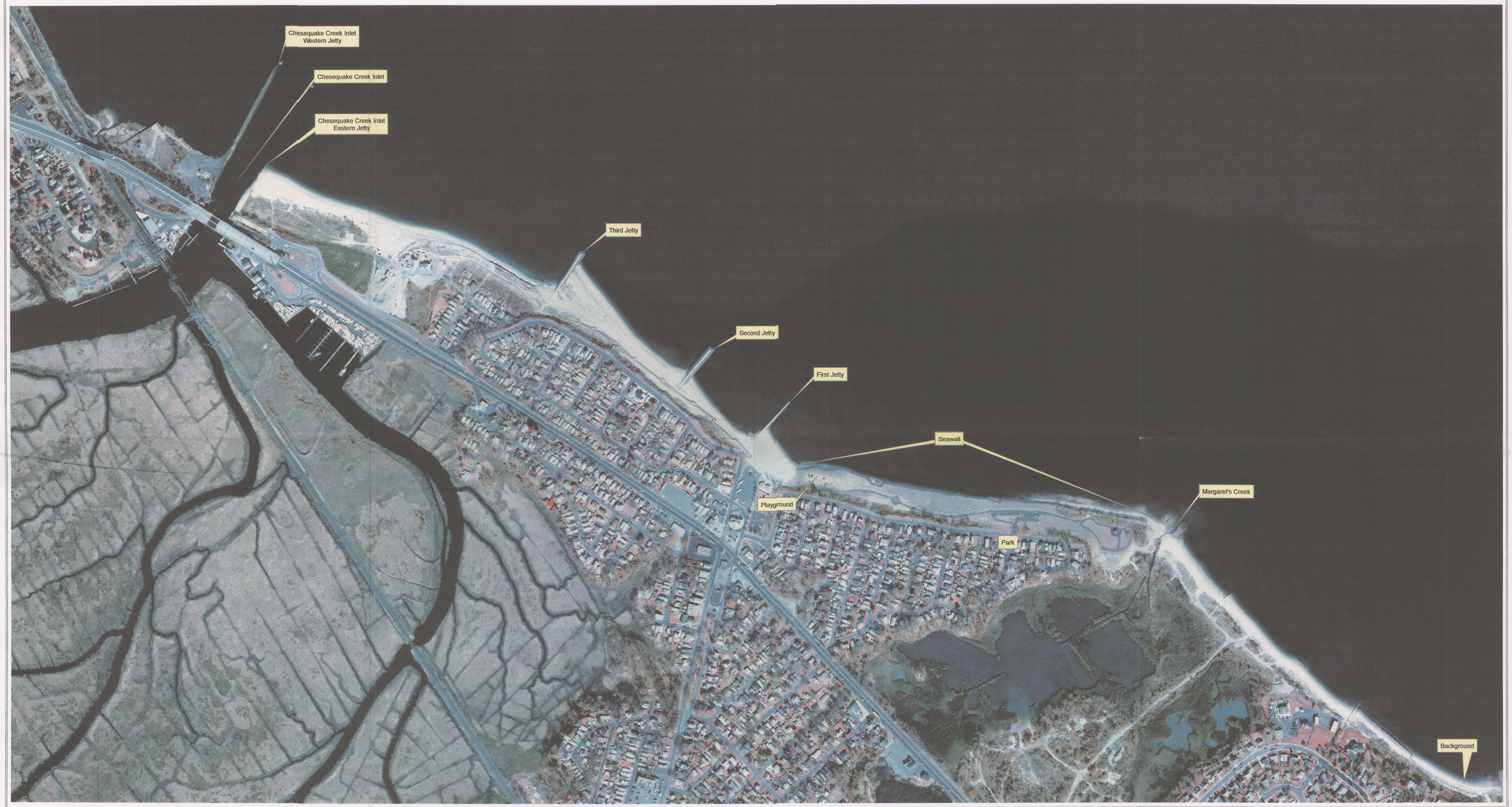
CLIENT NAME: EPA

WESTON SOLUTIONS

DATE: August 2008

FIGURE #: 1

P:\SAT2\Raritan_Bay_Slag\MXD\05944_RBS_Site_Loc.mxd



SOURCE:
New Jersey 2002 High Resolution Orthophotography. State of New Jersey Office of Information Technology, Office of Geographic Information Systems. http://njgin.nj.gov/OIT_IW/index.jsp.

300 150 0 300 600
Graphic Scale In Feet

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N
W E
S

REPORT DATE: August 2008	PROJECT MANAGER: D. Gaughan	CLIENT NAME: EPA	DRAWING TITLE: Raritan Bay Slag Study Area
DRAWING: 05943_RBS_Study_Area.mxd PATH: P:/SAT2/Raritan_Bay_Slag/MXD	CHECKED BY: D. Gaughan		
REVISION No. 0	CONTRACT No. EP-W-06-072	PROJECT NAME: Raritan Bay Slag	
WORK ORDER No. 20401.032.010.2064	DRAWN/MODIFIED BY: J. Lynes DATE CREATED: 08/25/2008		FIGURE: 2 SCALE: 1" = 300' DATE: 09/02/2008

TABLES

TABLE 1
CLP ROUTINE ANALYTICAL SERVICES
RARITAN BAY SLAG SITE

Sample Type	Number of Samples	Matrix	Sampling Device	Sample Container [1]	Sample Preservation	Technical Holding Time [2]	CLP Laboratory Analyses [3]
Soil	104 (including 6 duplicates)	Soil (Low Concentration)	Dedicated, disposable plastic scoop and plastic tray	One 8-oz. wide-mouth glass jar	Cool to 4°C	6 months to analyze	TAL Metals CLP SOW ILM05.4 (low-medium concentrations)
Sediment	116 (including 6 duplicates)	Soil (Low Concentration)	Dedicated, disposable plastic scoop and plastic tray	One 8-oz. wide-mouth glass jar	Cool to 4°C	6 months to analyze	TAL Metals CLP SOW ILM05.4 (low-medium concentrations)
Surface Water	32 (including two duplicates)	Aqueous (Low-Medium Concentration)	N/A	One-liter poly-ethylene bottle	HNO_3 to pH <2	6 months to analyze	TAL Metals and Dissolved Metals CLP SOW ILM05.4 (low-medium concentration)
Rinsate Blank	5	Aqueous (Low-Medium Concentration)	N/A	One-liter poly-ethylene bottle	HNO_3 to pH <2	6 months to analyze	TAL Metals CLP SOW ILM05.4 (low-medium concentrations)

[1] = Sample containers are certified clean by the manufacturer.
[2] = Technical holding times are calculated from the date of sample collection.
[3] = Contract Laboratory Program (CLP) Statements of Work (SOW) for Inorganic Analysis SOW ILM05.4 (low/medium concentrations) or most current revisions.

TABLE 2
SAMPLE DESCRIPTIONS/RATIONALE
RARITAN BAY SLAG SITE

SAMPLE NUMBER	DESCRIPTION/RATIONALE
RBS-S99 MS/MSD	Soil sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-2 inches. Matrix spike/matrix spike duplicate (MS/MSD) for quality assurance/quality control (QA/QC) purposes.
RBS-S100	Soil sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-2 inches.
RBS-S101	Soil sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-2 inches. Duplicate of sample RBS-S100 for QA/QC purposes.
RBS-S102	Soil sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-2 inches.
RBS-S103	Soil sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-2 inches.
RBS-S104	Soil sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-2 inches.
RBS-S105	Soil sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-2 inches.
RBS-S106	Soil sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-2 inches.
RBS-S107	Soil sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-2 inches.
RBS-S108	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S109	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S110	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S111	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S112	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S113	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S114	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S115	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S116	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S117	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S118	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S119 MS/MSD	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches. MS/MSD for QA/QC purposes.
RBS-S120	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S121	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches. Duplicate of sample RBS-S120 for QA/QC purposes.

TABLE 2 (Continued)
SAMPLE DESCRIPTIONS/RATIONALE
RARITAN BAY SLAG SITE

SAMPLE NUMBER	DESCRIPTION/RATIONALE
RBS-S122	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S123	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S124	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S125	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S126	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S127	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S128	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S129	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S130	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S131	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S132	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S133	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S134	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S135	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S136	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S137	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S138	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S139 **MS/MSD**	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches. MS/MSD for QA/QC purposes.
RBS-S140	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S141	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches. **Duplicate** of sample RBS-S140 for **QA/QC** purposes.
RBS-S142	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S143	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S144	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S145	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S146	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.

TABLE 2 (Continued)
SAMPLE DESCRIPTIONS/RATIONALE
RARITAN BAY SLAG SITE

SAMPLE NUMBER	DESCRIPTION/RATIONALE
RBS-S147	Soil sample collected from an area between the second jetty and the third jetty; depth 0-2 inches.
RBS-S148	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches.
RBS-S149	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches.
RBS-S150	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches.
RBS-S151	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches.
RBS-S152	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches.
RBS-S153	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches.
RBS-S154	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches.
RBS-S155	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches.
RBS-S156	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches.
RBS-S157	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches.
RBS-S158	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches.
RBS-S159 MS/MSD	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches. MS/MSD for QA/QC purposes.
RBS-S160	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches.
RBS-S161	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches. Duplicate of sample RBS-S160 for QA/QC purposes.
RBS-S162	Soil sample collected from an area between the first jetty and the second jetty; depth 0-2 inches.
RBS-S163	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S164	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S165	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S166	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S167	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S168	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S169	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S170	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S171	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.

TABLE 2 (Continued)
SAMPLE DESCRIPTIONS/RATIONALE
RARITAN BAY SLAG SITE

SAMPLE NUMBER	DESCRIPTION/RATIONALE
RBS-S172	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S173	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S174	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S175	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S176	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S177	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S178	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S179 MS/MSD	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches. MS/MSD for QA/QC purposes.
RBS-S180	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S181	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches. Duplicate of sample RBS-S180 for QA/QC purposes.
RBS-S182	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S183	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S184	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S185	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S186	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S187	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S188	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S189	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S190	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S191	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S192	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S193	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S194	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S195	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.

TABLE 2 (Continued)
SAMPLE DESCRIPTIONS/RATIONALE
RARITAN BAY SLAG SITE

SAMPLE NUMBER	DESCRIPTION/RATIONALE
RBS-S196	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S197	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S198 MS/MSD	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches. MS/MSD for QA/QC purposes.
RBS-S199	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S200	Duplicate of sample RBS-S199 for QA/QC purposes.
RBS-S201	Soil sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-2 inches.
RBS-S202	EXTRA IF NECESSARY
RBS-S203	EXTRA IF NECESSARY
RBS-S204	EXTRA IF NECESSARY
RBS-S205	EXTRA IF NECESSARY
RBS-S206	EXTRA IF NECESSARY
RBS-SED91 MS/MSD	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches. MS/MSD for QA/QC purposes.
RBS-SED92	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED93	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches. Duplicate of sample RBS-SED92 for QA/QC purposes.
RBS-SED94	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED95	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED96	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED97	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED98	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED99	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED100	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED101	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED102	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED103	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED104	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED105	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED106	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.

TABLE 2 (Continued)
SAMPLE DESCRIPTIONS/RATIONALE
RARITAN BAY SLAG SITE

SAMPLE NUMBER	DESCRIPTION/RATIONALE
RBS-SED107	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED108	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED109	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED110	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED111 MS/MSD	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches. MS/MSD for QA/QC purposes.
RBS-SED112	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED113	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches. Duplicate of sample RBS-SED112 for QA/QC purposes.
RBS-SED114	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED115	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED116	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED117	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED118	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED119	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED120	Sediment sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet; depth 0-3 inches.
RBS-SED121	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED122	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED123	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED124	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED125	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED126	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED127	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED128	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED129	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED130	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.

TABLE 2 (Continued)
SAMPLE DESCRIPTIONS/RATIONALE
RARITAN BAY SLAG SITE

SAMPLE NUMBER	DESCRIPTION/RATIONALE
RBS-SED131 MS/MSD	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches. MS/MSD for QA/QC purposes.
RBS-SED132	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED133	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches. Duplicate of sample RBS-SED132 for QA/QC purposes.
RBS-SED134	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED135	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED136	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED137	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED138	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED139	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED140	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED141	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED142	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED143	Sediment sample collected from an area between the second jetty and the third jetty; depth 0-3 inches.
RBS-SED144	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches.
RBS-SED145	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches.
RBS-SED146	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches.
RBS-SED147	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches.
RBS-SED148	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches.
RBS-SED149	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches.
RBS-SED150	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches.
RBS-SED151 MS/MSD	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches. MS/MSD for QA/QC purposes.
RBS-SED152	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches.
RBS-SED153	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches. Duplicate of sample RBS-SED152 for QA/QC purposes.
RBS-SED154	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches.
RBS-SED155	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches.

TABLE 2 (Continued)
SAMPLE DESCRIPTIONS/RATIONALE
RARITAN BAY SLAG SITE

SAMPLE NUMBER	DESCRIPTION/RATIONALE
RBS-SED156	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches.
RBS-SED157	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches.
RBS-SED158	Sediment sample collected from an area between the first jetty and the second jetty; depth 0-3 inches.
RBS-SED159	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED160	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED161	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED162	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED163	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED164	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED165	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED166	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED167	Sediment sample collected froni an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED168	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED169	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED170	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED171 MS/MSD	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches. MS/MSD for QA/QC purposes.
RBS-SED172	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED173	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches. Duplicate of RBS-SED172 for QA/QC purposes.
RBS-SED174	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED175	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED176	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.

TABLE 2 (Continued)
SAMPLE DESCRIPTIONS/RATIONALE
RARITAN BAY SLAG SITE

SAMPLE NUMBER	DESCRIPTION/RATIONALE
RBS-SED177	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED178	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED179	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED180	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED181	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED182	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED183	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED184	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED185	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED186	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED187	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED188	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED189	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED190	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED191 MS/MSD	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches. MS/MSD for QA/QC purposes.
RBS-SED192	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED193	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches. Duplicate of RBS-SED192 for QA/QC purposes.
RBS-SED194	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED195	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED196	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.

TABLE 2 (Continued)
SAMPLE DESCRIPTIONS/RATIONALE
RARITAN BAY SLAG SITE

SAMPLE NUMBER	DESCRIPTION/RATIONALE
RBS-SED197	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED199	Sediment sample collected from an area east of Margaret's Creek between the creek and the Middlesex County pumping station; depth 0-3 inches.
RBS-SED200	Background sediment sample collected from an area suspected not to be influenced by past site activities; depth 0-3 in.
RBS-SED201	Background sediment sample collected from an area suspected not to be influenced by past site activities; depth 0-3 in.
RBS-SED202	Background sediment sample collected from an area suspected not to be influenced by past site activities; depth 0-3 in.
RBS-SED203	Background sediment sample collected from an area suspected not to be influenced by past site activities; depth 0-3 in.
RBS-SED204	Background sediment sample collected from an area suspected not to be influenced by past site activities; depth 0-3 in.
RBS-SED205	Background sediment sample collected from an area suspected not to be influenced by past site activities; depth 0-3 in.
RBS-SED206	EXTRA IF NECESSARY
RBS-SED207	EXTRA IF NECESSARY
RBS-SED208	EXTRA IF NECESSARY
RBS-SED209	EXTRA IF NECESSARY
RBS-SED210	EXTRA IF NECESSARY
RBS-SW25 MS/MSD	Surface water sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet. MS/MSD for QA/QC purposes.
RBS-SW25D	Surface water sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet.
RBS-SW26	Surface water sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet.
RBS-SW 26D	Surface water sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet.
RBS-SW27	Surface water sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet. Duplicate of sample RBS-SW26 for QA/QC purposes.
RBS-SW27D	Surface water sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet. Duplicate of sample RBS-SW26D for QA/QC purposes.
RBS-SW28	Surface water sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet.
RBS-SW28D	Surface water sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet.
RBS-SW29	Surface water sample collected from an area between the third jetty and the eastern jetty at the

TABLE 2 (Continued)
SAMPLE DESCRIPTIONS/RATIONALE
RARITAN BAY SLAG SITE

SAMPLE NUMBER	DESCRIPTION/RATIONALE
	Cheesequake Creek inlet.
RBS-SW29D	Surface water sample collected from an area between the third jetty and the eastern jetty at the Cheesequake Creek inlet.
RBS-SW30	Surface water sample collected from an area between the second jetty and the third jetty.
RBS-SW30D	Surface water sample collected from an area between the second jetty and the third jetty.
RBS-SW31	Surface water sample collected from an area between the second jetty and the third jetty.
RBS-SW31D	Surface water sample collected from an area between the second jetty and the third jetty.
RBS-SW32	Surface water sample collected from an area between the second jetty and the third jetty.
RBS-SW32D	Surface water sample collected from an area between the second jetty and the third jetty.
RBS-SW33	Surface water sample collected from an area between the second jetty and the third jetty.
RBS-SW33D	Surface water sample collected from an area between the second jetty and the third jetty.
RBS-SW34	Surface water sample collected from an area between the first jetty and the second jetty.
RBS-SW34D	Surface water sample collected from an area between the first jetty and the second jetty.
RBS-SW35	Surface water sample collected from an area between the first jetty and the second jetty.
RBS-SW35D	Surface water sample collected from an area between the first jetty and the second jetty.
RBS-SW36	Surface water sample collected from an area between the first jetty and the second jetty.
RBS-SW36D	Surface water sample collected from an area between the first jetty and the second jetty.
RBS-SW37	Surface water sample collected from area east of Margaret's Creek between the creek and the Middlesex County pumping station.
RBS-SW37D	Surface water sample collected from area east of Margaret's Creek between the creek and the Middlesex County pumping station.
RBS-SW38	Surface water sample collected from area east of Margaret's Creek between the creek and the Middlesex County pumping station.
RBS-SW38D	Surface water sample collected from area east of Margaret's Creek between the creek and the Middlesex County pumping station.
RBS-SW39	Surface water sample collected from area east of Margaret's Creek between the creek and the Middlesex County pumping station.
RBS-SW39D	Surface water sample collected from area east of Margaret's Creek between the creek and the Middlesex County pumping station.
RBS-SW40	Surface water sample collected from area east of Margaret's Creek between the creek and the Middlesex County pumping station.
RBS-SW40D	Surface water sample collected from area east of Margaret's Creek between the creek and the Middlesex County pumping station.
RBS-SW41	Surface water sample collected from area east of Margaret's Creek between the creek and the Middlesex County pumping station.
RBS-SW41D	Surface water sample collected from area east of Margaret's Creek between the creek and the Middlesex County pumping station.
RBS-SW42	EXTRA IF NECESSARY
RBS-SW42D	EXTRA IF NECESSARY
RBS-SW43	EXTRA IF NECESSARY
RBS-SW43D	EXTRA IF NECESSARY
RBS-SW44	EXTRA IF NECESSARY
RBS-SW44D	EXTRA IF NECESSARY

TABLE 2 (Continued)
SAMPLE DESCRIPTIONS/RATIONALE
RARITAN BAY SLAG SITE

SAMPLE NUMBER	DESCRIPTION/RATIONALE
RBS-SW45 **MS/MSD**	EXTRA IF NECESSARY **MS/MSD** for QA/QC purposes.
RBS-SW45**D**	EXTRA IF NECESSARY
RBS-RIN05	Rinsate blank (dedicated, disposable plastic scoop and tray) for QA/QC purposes.
RBS-RIN06	Rinsate blank (dedicated, disposable plastic scoop and tray) for QA/QC purposes.
RBS-RIN07	Rinsate blank (dedicated, disposable plastic scoop and tray) for QA/QC purposes.
RBS-RIN08	Rinsate blank (dedicated, disposable plastic scoop and tray) for QA/QC purposes.
RBS-RIN09	Rinsate blank (dedicated, disposable plastic scoop and tray) for QA/QC purposes.

Temperature Blanks will be placed in each cooler with samples shipped to the laboratory.
Additional source / waste samples may be added or deleted depending on further investigation.

TABLE 3
SAMPLE ANALYSES, BOTTLE TYPES, AND PRESERVATIVES
RARITAN BAY SLAG SITE

SAMPLE NUMBER	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
RBS-S99 MS/MSD	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S100	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S101	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S102	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S103	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S104	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S105	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S106	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S107	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S108	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S109	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S110	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S111	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S112	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S113	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S114	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S115	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S116	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S117	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S118	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S119 MS/MSD	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S120	1 8-oz glass jar	TAL Metals	Cool, 4° C

TABLE 3 (Continued)
SAMPLE ANALYSES, BOTTLE TYPES, AND PRESERVATIVES
RARITAN BAY SLAG SITE

SAMPLE NUMBER	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
RBS-S121	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S122	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S123	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S124	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S125	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S126	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S127	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S128	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S129	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S130	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S131	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S132	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S133	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S134	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S135	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S136	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S137	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S138	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S139 MS/MSD	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S140	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S141	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S142	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S143	1 8-oz glass jar	TAL Metals	Cool, 4° C

TABLE 3 (Continued)
SAMPLE ANALYSES, BOTTLE TYPES, AND PRESERVATIVES
RARITAN BAY SLAG SITE

SAMPLE NUMBER	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
RBS-S144	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S145	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S146	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S147	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S148	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S149	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S150	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S151	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S152	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S153	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S154	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S155	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S156	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S157	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S158	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S159 MS/MSD	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S160	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S161	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S162	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S163	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S164	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S165	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S166	1 8-oz glass jar	TAL Metals	Cool, 4° C

TABLE 3 (Continued)
SAMPLE ANALYSES, BOTTLE TYPES, AND PRESERVATIVES
RARITAN BAY SLAG SITE

SAMPLE NUMBER	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
RBS-S167	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S168	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S169	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S170	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S171	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S172	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S173	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S174	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S175	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S176	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S177	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S178	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S179 MS/MSD	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S180	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S181	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S182	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S183	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S184	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S185	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S186	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S187	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S188	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S189	1 8-oz glass jar	TAL Metals	Cool, 4° C

TABLE 3 (Continued)
SAMPLE ANALYSES, BOTTLE TYPES, AND PRESERVATIVES
RARITAN BAY SLAG SITE

SAMPLE NUMBER	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
RBS-S190	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S191	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S192	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S193	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S194	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S195	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S196	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S197	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S198 MS/MSD	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S199	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S200	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-S201	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED91 MS/MSD	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED92	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED93	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED94	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED95	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED96	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED97	1 8-oz glass jar 1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED98	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED99	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED100	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED101	1 8-oz glass jar	TAL Metals	Cool, 4° C

TABLE 3 (Continued)
SAMPLE ANALYSES, BOTTLE TYPES, AND PRESERVATIVES
RARITAN BAY SLAG SITE

SAMPLE NUMBER	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
RBS-SED102	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED103	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED104	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED105	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED106	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED107	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED108	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED109	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED110	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED111 MS/MSD	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED112	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED113	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED114	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED115	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED116	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED117	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED118	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED119	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED120	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED121	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED122	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED123	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED124	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED125	1 8-oz glass jar	TAL Metals	Cool, 4° C

TABLE 3 (Continued)
SAMPLE ANALYSES, BOTTLE TYPES, AND PRESERVATIVES
RARITAN BAY SLAG SITE

SAMPLE NUMBER	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
RBS-SED126	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED127	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED128	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED129	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED130	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED131 MS/MSD	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED132	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED133	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED134	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED135	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED136	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED137	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED138	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED139	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED140	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED141	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED142	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED143	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED144	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED145	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED146	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED147	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED148	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED149	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED150	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED151 MS/MSD	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED152	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED153	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED154	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED155	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED156	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED157	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED158	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED159	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED160	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED161	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED162	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED163	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED164	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED165	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED166	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED167	1 8-oz glass jar	TAL Metals	Cool, 4° C

TABLE 3 (Continued)
SAMPLE ANALYSES, BOTTLE TYPES, AND PRESERVATIVES
RARITAN BAY SLAG SITE

SAMPLE NUMBER	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
RBS-SED168	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED169	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED170	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED171 MS/MSD	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED172	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED173	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED174	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED175	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED176	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED177	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED178	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED179	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED180	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED181	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED182	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED183	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED184	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED185	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED186	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED187	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED188	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED189	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED190	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED191 MS/MSD	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED192	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED193	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED194	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED195	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED196	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED197	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED199	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED200	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED201	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED202	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED203	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED204	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SED205	1 8-oz glass jar	TAL Metals	Cool, 4° C
RBS-SW25 MS/MSD	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW25D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW26	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW 26D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2

TABLE 3 (Continued)
SAMPLE ANALYSES, BOTTLE TYPES, AND PRESERVATIVES
RARITAN BAY SLAG SITE

SAMPLE NUMBER	SAMPLE BOTTLES	ANALYSIS	PRESERVATION
RBS-SW27	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW27D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW28	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW28D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW29	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW29D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW30	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW30D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW31	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW31D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW32	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW32D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW33	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW33D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW34	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW34D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW35	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW35D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW36	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW36D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW37	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW37D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW38	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW38D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW39	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW39D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW40	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW40D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-SW41	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-SW41D	1 1-L poly bottle	Dissolved Metals	HNO_3 to pH < 2
RBS-RIN05	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-RIN06	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-RIN07	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-RIN08	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2
RBS-RIN09	1 1-L poly bottle	TAL Metals	HNO_3 to pH < 2